IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of HEDLUND et al

Atty Dkt. 1579-561
C# M#

Serial No. 09/840,029

TC/A.U. 3742

Examiner: Robinson

Filed: April 24, 2001

Date: July 11, 2005

Title: MR-COMPATIBLE METHODS AND SYSTEMS FOR CARDIAC MONITORING AND GATING

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

COMBINED RESPONSE AND REQUEST (PETITION) UNDER RULE 183

This is a response/amendment/letter in the above-identified application and includes an attachment which is hereby incorporated by reference and the signature below serves as the signature to the attachment in the absence of any other signature thereon.

☐ **Correspondence Address Indication Form Attached.**

Fees are attached as calculated below:

Total effective claims after amendment	**0**	minus highest number			
previously paid for	**20**	(at least 20) =	0	x $50.00	$0.00 (1202)/$0.00 (2202) $
Independent claims after amendment	**0**	minus highest number			
previously paid for	**3**	(at least 3) =	0	x $200.00	$0.00 (1201)/$0.00 (2201) $

If proper multiple dependent claims now added for first time, (ignore improper); add $360.00 (1051)/$180.00 (2051) $

PETITIONS:

1. Petition is hereby made to extend the current due date so as to cover the filing date of this paper.

2. Petition is also hereby made under 37 CFR §1.183 to suspend the rules to credit any extension fees deemed necessary in order to ensure entry and consideration of the attached paper. (See section IV in the attached)

TOTAL FEE ENCLOSED $ 0.00

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

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NIXON & VANDERHYE P.C.
By Atty: Bryan H. Davidson, Reg. No. 30,251

Signature: _____

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

HEDLUND et al Atty. Ref.: **1579-561**

Serial No. **09/840,029** Group: **3742**

Filed: **April 24, 2001** Examiner: **Robinson**

For: **MR-COMPATIBLE METHODS AND SYSTEMS FOR CARDIAC MONITORING AND GATING**

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July 11, 2005

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMBINED RESPONSE AND REQUEST (PETITION) UNDER RULE 183

Sir:

This paper is being filed in response to the substantive issues raised in the Official Action dated January 12, 2005.

The undersigned hereby petitions for a time extension up to, and including, July 12, 2005. As noted in section IV below, while the petition fees may be charged to the undersigned's Deposit Account in order to ensure entry and consideration of this paper, the undersigned formally requests (petitions) under 37 CFR §1.183 to suspend the rules so as to allow such petition fees to be immediately credited back to such account.

I. Procedural Background

This response is being filed subsequent to the Decision on Petition dated June 7, 2005 (hereinafter "the June 7th Decision") which GRANTED the applicants' petition dated August 16, 2004 for withdrawal of the restriction requirement in the office action

mailed on March 17, 2004. Thus, the June 7th Decision confirmed that applicants should have originally received an action on the merits of pending claims 1-17 and claims 31-36.

Meanwhile, however, the subject non-final Official Action dated January 12, 2005 (hereinafter "the January 12th Official Action") was issued by the Examiner wherein claim 1 was rejected on the same basis as the prior Official Action dated July 22, 2004 (hereinafter "the July 22nd Official Action"). Specifically, only claim 1 was rejected in both the July 22nd and January 12th Official Actions as allegedly being anticipated by Negus et al, USP 6,595,987 (hereinafter "Negus et al").[1]

II. Response to Restriction/Election

The Examiner's reasoning with respect to the restriction/election requirement as between the pending claims 1-17 and 31-36 noted on pages 2-3 of the January 12th Official Action has of course been rendered moot by the June 7th Decision. Accordingly, further comment thereon is unnecessary.

III. Response to 35 USC §102(b) Rejection

As noted briefly above, only claim 1 has been rejected under 35 USC §102(b) as allegedly anticipated by Negus et al. Applicants again emphatically disagree for the same reasons advanced in the responsive Amendment dated October 21, 2004 (the entire content of which is expressly incorporated hereinto by reference).

Specifically, applicants again note that the Negus et al unequivocally does ***not*** disclose or even remotely suggest a method for detecting a phase in a cardiac cycle whereby movements of an anatomic structure affected by cardiac activity are detected ***optically***. Instead, Negus et al detects the ***electrical*** activity of a beating heart (via its

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[1] Pending claims 2-5 were indicated by the Examiner to be allowable in both the July 22nd and January 12th Official Actions.

ECG), and it is this detected ***electrical*** activity which is delivered to a trigger generator 18 which:

> "...provides a trigger pulse 20 to laser firing circuit 22, which in turn energizes laser unit 24 including a laser power supply and a laser to produce a pulsed laser beam through articulated optical arm 26 into optical handpiece 28 ***to make a hole*** 30 in heart 14." (See column 6, lines 11-19, emphasis added)

Pending claim 1 herein specifically requires the steps of (a) ***optically*** detecting movements of an anatomic structure affected by cardiac activity, (b) deriving a cardiac signal in response to said ***optically*** detected movements which is indicative of a phase of in a cardiac cycle, and then (c) generating a trigger signal in response to the derived cardiac signal.

The Examiner notes in the January 12th Official Action that:

> "Applicant's argument that detecting the electrical activity of a moving muscle is not the same as detecting the moving muscle itself is not persuasive."

Significantly, the Examiner's statement does not provide any reason as to why applicants arguments are not persuasive. Nor does it note that the present invention ***optically*** detects movement of an anatomic structure affected by cardiac activity. Thus, The Examiner's statement apparently ignores the fact that Negus et al detects cardiac cycle ***electrically*** (i.e., via ECG) whereas the present invention detects cardiac cycle ***optically*** by detecting the inferential movements of an anatomic structure affected by cardiac activity. How can the ***electrical*** detection of a cardiac cycle via ECG as in

Negus et al anticipate under 35 USC §102(b) the ***optical*** detection of an anatomic structure affected by a cardiac cycle as defined by claim 1? It simply cannot.

Thus, withdrawal of the rejection advanced against claim 1 under 35 USC §102(b) based on Negus et al is in order.

While the arguments above have focused on the inappropriateness of Negus et al as a reference against pending claim 1, it will be observed that such arguments are equally germane to all pending claims herein. (Please see in this regard, the claim chart comparisons on pages 4 and 7 of the Petition filed August 16, 2004.)

Thus, allowance of claims 1-17 and 31-36 is in order.

IV. Concurrent Fee Authorization and Request (Petition) for Fee Refund and/or Suspension of the Rules to Accommodate the Same If Necessary

Any fee deemed necessary (including the time extension fee) to ensure proper entry of the present paper (and any other paper filed by this firm in the subject application), may be charged to our Deposit Account No. 14-1140.

Should the Office deem it necessary to charge the time extension fees against the undersigned's account in order to allow entry and consideration of the subject response, then please treat this as a formal request (petition) under 37 CFR §1.183 to suspend the rules so as to allow immediate refund of such fees to the undersigned's account. The reasons for such refund are stated below.

As noted above, the Examiner's January 12th Official Action was required to be issued notwithstanding the fact that the applicants' Petition to withdraw the restriction requirement of March 17, 2004 was filed some four months prior thereto on August 16, 2004. In the interim between August 16, 2004 and the January 12, 2005 Official Action, of course, the applicants responded on the merits via the Amendment dated October 21, 2004.

And, since the June 7th Decision was issued some five (5) months after the January 12th Official Action and some nine (9) months after the August 16, 2004 Petition, the case could not reasonably be remanded to the Examiner for withdrawal of the January 12th Official Action so that an action on the merits of all pending claims herein could be issued. Thus, the present response has been necessary in order to preclude even the prospect of abandonment.

Under the circumstances noted immediately above, the undersigned submits it is manifestly unfair for the Office to collect the time extension fees to permit the timely filing of the present response due to the Office's delay in issuing its June 7th Decision. Moreover, the fact that the June 7th Decision confirmed the applicants' view that claims 1-17 and 31-36 should ***always*** have been treated collectively on the merits makes the filing of the subject response substantively unnecessary. Thus, the payment of any required time extension fees under these conditions would be confiscatory.

An early and favorable reply is awaited.

Respectfully Submitted,

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By: 

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